

Substantial Exposure to Blood or Other Potentially Infectious Body Fluids

Washington State Clinical Laboratory Advisory Council to the Washington State Department of Health
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FOR EDUCATIONAL PURPOSES ONLY

The individual clinician is in the best position to determine which tests are most appropriate for a particular patient.

Is source patient known?

Yes

- Test source patient for HIV, HBsAg, anti-HCV and ALT (SGPT) unless already tested
- Perform clinical evaluation of exposed person
- Test exposed person for anti-HBs (if status of exposed person is unknown), anti-HCV, ALT, and HIV
- Initiate or complete hepatitis B vaccine, give hepatitis immune globulin and HIV post-exposure prophylaxis if indicated
- Provide counseling about risk of transmission

No

- Perform clinical evaluation of exposed person
- Test exposed person for anti-HBs (if status of exposed person is unknown), anti-HCV, ALT, and HIV
- Initiate or complete hepatitis B vaccine, give hepatitis immune globulin and HIV post-exposure prophylaxis if indicated
- Provide counseling about risk of transmission

HIV Protocol

Note: Refer to HIV Screening Guidelines for additional information

SOURCE	EXPOSED PERSON
HIV negative, source low risk	- HIV testing
	- No intervention
HIV positive, HIV negative but source high risk, or HIV status unobtainable	- Clinical evaluation
	- Consult CDC guidelines for prophylaxis
	- Test for HIV initially and again at 6 weeks, 3 months, and 6 months (at 12 months only if source is also infected with hepatitis C)

Hepatitis C Protocol

Note: Refer to Hepatitis C Management Guidelines for additional information

SOURCE	EXPOSED PERSON
Low Risk	- No intervention
High risk or anti-HCV positive	- Test for anti-HCV and liver function (ALT) initially and again at 4-6 months. May offer HCV by PCR testing at 4-6 weeks.

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Hepatitis B Protocol

Recommended post-exposure prophylaxis for percutaneous or permucosal exposure to hepatitis B virus, United States

Note: Refer to Acute Hepatitis Testing Guidelines & Chronic Hepatitis Guidelines for additional information

Vaccination and anti-body response status of exposed person	Treatment when source is		
	HBsAg positive	HBsAg negative	Source not tested or status unknown
Unvaccinated	HBIG ¹ x 1; initiate HB vaccine series ²	Initiate HB vaccine series	Initiate HB vaccine series
Previously vaccinated:			
<i>Known responder</i> ³	No treatment	No treatment	No treatment
<i>Known non-responder</i>	HBIG x 2 or HBIG x 1 and initiate revaccination	No treatment	If known high-risk source, treat as if source were HBsAg positive
<i>Antibody response unknown</i>	Test exposed person for anti-HBs 1. If adequate ³ , no treatment 2. If inadequate ³ , HBIG X 1 and vaccine booster	No treatment	Test exposed person for anti-HBs 1. If adequate ³ , no treatment 2. If inadequate ³ , give vaccine booster and recheck titer in 1-2 months

* About 5% of people don't respond to the hepatitis B vaccine; most are over age 50 or obese. 50% of non-responders to the first series of vaccine (3 doses) will respond to a second full series of 3 doses. If a positive anti-HBs can't be shown after 3 to 6 doses (1 to 2 series), the person is considered a non-responder and not protected.

References:

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3. Nursing Clinics of North America 1999; 34:213
4. CDC. Recommendations for Prevention and Control of Hepatitis C virus (HCV) Infection and HCV-Related Chronic Disease. MMWR 1998;47 (RR-19);1-39
5. CDC. Hepatitis B Virus: A Comprehensive Strategy for Eliminating Transmission in the United States through Universal Childhood Vaccination: Recommendations of the ACIP. MMWR 1991;40 (RR-13);21-25
6. CDC. Public Health Service Guidelines for the Management of Health-Care Worker Exposures to HIV and Recommendations for Post Exposure Prophylaxis. MMWR 1998;47 (RR-7);1-28
7. CDC. Hepatitis B Post-exposure Prophylaxis Recommendations MMWR 1997; (RR-18) p23 Table 3
8. CDC. Updated United States Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV and HIV and Recommendations for Post Exposure Prophylaxis. MMWR 2001;50 (RR-11); 1-42.

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¹ Hepatitis B immune globulin; dose 0.06 mL/kg intramuscularly

² Hepatitis B vaccine

³ Responder is defined as a person with adequate levels of serum antibody to hepatitis B surface antigen (i.e., anti-HBs \geq 10 mIU/mL); inadequate response to vaccination defined as serum anti-HBs < 10 mIU/mL